

WHAT IS CLAIMED IS:

1. An inhibiting device for inhibiting reusing a used cartridge, comprising:

a measurer for measuring an estimated used amount of expendable material contained in a cartridge according to actuation of said cartridge, said expendable material being used for forming an image;

a determiner for determining said cartridge as said used cartridge when said estimated used amount reaches a predetermined amount;

an inhibitor for inhibiting reusing said cartridge determined as used by said determiner from being used for forming said image; and

an alarm means for indicating that said cartridge determined as used by said determiner is unusable for forming said image.

2. An inhibiting device as defined in claim 1, wherein:

said cartridge comprises an expendable material chamber for containing said expendable material, a developer roller, and a memory; and

said measurer comprises a detector for detecting rotation of said developer roller, and a writer for writing a cumulative value of a rotation number of said developer roller obtained from a signal from said detector as said estimated used amount.

3. An inhibiting device as defined in claim 2, wherein said measurer, said determiner, said inhibitor, and said alarm means are provided in said cartridge.

4. An inhibiting device as defined in claim 1, wherein:

said cartridge comprises an expendable material chamber for containing said expendable material, a developer roller, a memory, a photoreceptor drum, and a charger roller; and

said measurer comprises a detector for detecting rotation of one of said developer roller, said charger roller, and said photoreceptor drum, and a writer for writing a cumulative value of a rotation number obtained from a signal from said detector as said estimated used amount.

5. An inhibiting device as defined in claim 4, wherein said measurer, said determiner, said inhibitor, and said alarm means are provided in said cartridge.

6. An image forming system including a cartridge and an image forming device in which said cartridge is set in a removable manner, said image forming system comprising:

a measurer for measuring an estimated used amount of expendable material contained in a cartridge according to actuation of said cartridge, said expendable material being used for forming an image;

a determiner for determining said cartridge as said used cartridge when said estimated used amount reaches a predetermined amount;

an inhibitor for inhibiting reusing said cartridge determined as used by said determiner from being used for forming said image; and

an alarm means for indicating that said cartridge determined as used by said determiner is unusable for forming said image.

7. An image forming system as defined in claim 6, wherein:
said measurer, said determiner, said inhibitor, and said alarm means are provided in said cartridge;

said cartridge further comprises an expendable material chamber for containing said expendable material, a developer roller, a memory, a photoreceptor drum, and a charger roller; and

said measurer comprises a detector for detecting rotation of one of said developer roller, said charger roller, and said photoreceptor drum and a writer for writing a cumulative value of a rotation number obtained from a signal from said detector as said estimated used amount.

8. An inhibiting device for inhibiting reusing a used cartridge, comprising:
a measurer for detecting directly a remaining amount of expendable material contained in a cartridge, said expendable material is used for forming an image;

a determiner for determining said cartridge as said used cartridge when said remaining amount of said expendable material detected by said measurer is no more than a predetermined amount;

an inhibitor for inhibiting reusing said cartridge determined as used by said determiner from being used for forming said image; and

an alarm means for indicating that said cartridge determined as used by said determiner is unusable for forming said image.

9. An inhibiting device as defined in claim 8, wherein:

said cartridge comprises an expendable material chamber for containing said expendable material, and a developer roller; and

said measurer is provided in said expendable material chamber and includes a photo sensor for measuring said remaining amount of said expendable material in an optical manner.

10. An inhibiting device as defined in claim 9, wherein said cartridge further comprises a photoreceptor drum and a charger roller.

11. An inhibiting device as defined in claim 10, wherein said measurer, said determiner, said inhibitor, and said alarm means are provided in said cartridge.

12. An image forming system including a cartridge and an image forming device in which said cartridge is set in a removable manner, said image forming system comprising:

a measurer for detecting directly a remaining amount of expendable material contained in a cartridge, said expendable material is used for forming an image;

a determiner for determining said cartridge as said used cartridge when said remaining amount of said expendable material detected by said measurer is no more than a predetermined amount;

an inhibitor for inhibiting reusing said cartridge determined as used by said determiner from being used for forming said image; and

an alarm means for indicating that said cartridge determined as used by said determiner is unusable for forming said image.

13. An image forming system as defined in claim 12, wherein said measurer, said determiner, said inhibitor, and said alarm means are provided in said cartridge.

14. An image forming system as defined in claim 13, wherein:

said cartridge further comprises an expendable material chamber for containing said expendable material, and a developer roller; and

said measurer is provided in said expendable material chamber and includes a photo sensor for measuring said remaining amount of said expendable material in an optical manner.

15. An image forming system as defined in claim 14, wherein said cartridge further comprises a photoreceptor drum and a charger roller.

16. An inhibiting device for inhibiting reusing a used cartridge, comprising:
a measurer for measuring an estimated remaining amount of expendable material contained in a cartridge according to actuation of said cartridge, said expendable material being used for forming an image;
a determiner for determining said cartridge as said used cartridge when said estimated remaining amount is no more than a predetermined amount;
an inhibitor for inhibiting reusing said cartridge determined as used by said determiner from being used for forming said image; and
an alarm means for indicating that said cartridge determined as used by said determiner is unusable for forming said image.

17. An image forming system including a cartridge and an image forming device in which said cartridge is set in a removable manner, said image forming system comprising:
a measurer for measuring an estimated remaining amount of expendable material contained in a cartridge according to actuation of a cartridge, said expendable material is used for forming an image;
a determiner for determining said cartridge as said used cartridge when said estimated remaining amount is no more than a predetermined amount;
an inhibitor for inhibiting reusing said cartridge determined as used by said determiner from being used for forming said image; and
an alarm means for indicating that said cartridge determined as used by said determiner is unusable for forming said image.